Please replace the sequence listing filed July 19, 2001 with the enclosed sequence listing.

In the Claims:

Please amend claims 4-13, 19, 27-37. Amendments to the claims are indicated in the attached "Marked Up Version of Amendments" (pages i-viii).

4. (Amended) The method of Claim 1 wherein the agonist is a thrombin peptide derivative, or a physiologically functional equivalent thereof, comprising a polypeptide represented by the following structural formula:

Asp-Ala-R;

wherein R is a serine esterase conserved sequence.

5. (Amended) The method of Claim 4 wherein the agonist consists of between about 12 and about 23 amino acids.

6. (Amended) The method of Claim 5 wherein the serine esterase conserved sequence consists of the amino acid sequence of SEQ ID: NO. 1 (Cys-Glu-Gly-Asp-Ser-Gly-Gly-Pro-Phe-Val), or a C-terminal truncated fragment thereof consisting of at least six amino acids, provided that zero, one, two or three amino acids in the serine esterase conserved sequence differ from the corresponding position of SEQ ID: NO. 1.

Q5

7. (Amended) The method of Claim 5 wherein the serine esterase conserved sequence consists of the amino acid sequence of SEQ ID: NO. 1 (Cys-Glu-Gly-Asp-Ser-Gly-Gly-Pro-Phe-Val), or a C-terminal truncated fragment thereof consisting of at least nine amino acids, provided that zero, one or two of the amino acids

in the serine esterase conserved region are conservative substitutions of the corresponding amino acid in SEQ ID: NO. 1.

8. (Amended) The method of Claim 5 wherein the serine esterase conserved sequence consists of the amino acid sequence of SEQ ID: NO. 2 (Cys-X1-Gly-Asp-Ser-Gly-Gly-Pro-X2-Val, wherein X1 is Glu or Gln and X2 is Phe, Met, Leu, His or Val), or a C-terminus truncated fragment of SEQ ID: NO. 2, said fragment consisting of at least six amino acids.

9. (Amended) The method of Claim 8 wherein the agonist comprises the amino acid sequence Arg-Gly-Asp-Ala (SEQ ID: NO. 3).

10. (Amended) The method of Claim 9 wherein the agonist comprises the amino acid sequence Arg-Gly-Asp-Ala-Cys-X1-Gly-Asp-Ser-Gly-Gly-Pro-X2-Val (SEQ ID: NO. 4), wherein X1 is Glu or Gln and X2 is Phe, Met, Leu, His or Val.

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11. (Amended) The method of Claim 10 wherein the agonist consists of the amino acid sequence
Ala-Gly-Try-Lys-Pro-Asp-Glu-Gly-Lys-Arg-Gly-Asp-Ala-Cys-Glu-Gly-Asp-Ser-Gly-Gly -Pro-Phe-Val- (SEQ ID: NO. 5), or an N-terminal truncated fragment thereof, provided that zero, one, two or three amino acids at positions 1-9 in the agonist differ from the amino acid at the corresponding position of SEQ ID: NO. 5.

12. (Amended) The method of Claim 10 wherein the agonist consists of the amino acid sequence
Ala-Gly-Try-Lys-Pro-Asp-Glu-Gly-Lys-Arg-Gly-Asp-Ala-Cys-Glu-Gly-Asp-Ser-Gly-Gly -Pro-Phe-Val- (SEQ ID: NO. 5), or an N-terminal truncated fragment thereof, provided

that zero, one or two amino acids at positions 1-9 in the agonist are conservative substitutions of the amino acid at the corresponding position of SEQ ID: NO. 5.

a5

13. (Amended) The method of Claim 11 wherein the agonist is administered in a pharmaceutical composition additionally comprising an implantable, biocompatible carrier.

19. (Amended) The pharmaceutical composition of Claim 18, wherein the thrombin receptor agonist is a thrombin peptide derivative, or a physiologically functional equivalent thereof, comprising a polypeptide represented by the following structural formula:

a6

Asp-Ala-R;

wherein R is a serine esterase conserved sequence.

27. (Amended) The pharmaceutical composition of Claim 19 wherein the agonist consists of between about 12 and about 23 amino acids.

28. (Amended) The pharmaceutical composition of Claim 27 wherein the serine esterase conserved sequence consists of the amino acid sequence of SEQ ID: NO. 1 (Cys-Glu-Gly-Asp-Ser-Gly-Gly-Pro-Phe-Val), or a C-terminal truncated fragment thereof consisting of at least six amino acids, provided that zero, one, two or three amino acids in the serine esterase conserved sequence differ from the corresponding position of SEQ ID: NO. 1.

a7

29. (Amended) The pharmaceutical composition of Claim 27 wherein the serine esterase conserved sequence consists of the amino acid sequence of SEQ ID: NO. 1 (Cys-Glu-Gly-Asp-Ser-Gly-Gly-Pro-Phe-Val), or a C-terminal truncated fragment thereof

consisting of at least nine amino acids, provided that zero, one or two of the amino acids in the serine esterase conserved sequence are conservative substitutions of the corresponding amino acid in SEQ ID: NO. 1.

30. (Amended) The pharmaceutical composition of Claim 27 wherein the serine esterase conserved sequence consists of the amino acid sequence of SEQ ID: NO. 2 (Cys-X1-Gly-Asp-Ser-Gly-Gly-Pro-X2-Val) , wherein X1 is Glu or Gln and X2 is Phe, Met, Leu, His or Val), or a C-terminus truncated fragment of SEQ ID: NO. 2, said fragment consisting of at least six amino acids.

31. (Amended) The pharmaceutical composition of Claim 30 wherein the agonist comprises the amino acid sequence Arg-Gly-Asp-Ala (SEQ ID: NO. 3).

32. (Amended) The pharmaceutical composition of Claim 31 wherein the agonist comprises the amino acid sequence Arg-Gly-Asp-Ala-Cys-X_1-Gly-Asp-Ser-Gly-Gly-Pro-X_2-Val (SEQ ID: NO. 4), wherein X_1 is Glu or Gln and X_2 is Phe, Met, Leu, His or Val.

a7 Cont

33. (Amended) The pharmaceutical composition of Claim 32 wherein the agonist consists of the amino acid sequence

Ala-Gly-Try-Lys-Pro-Asp-Glu-Gly-Lys-Arg-Gly-Asp-Ala-Cys-Glu-Gly-Asp-Ser-Gly-Gly-Pro-Phe-Val- (SEQ ID: NO. 5), or an N-terminal truncated fragment thereof, provided that zero, one, two or three amino acids at positions 1-9 in the agonist differ from the amino acid at the corresponding position of SEQ ID: NO. 5.

34. (Amended) The pharmaceutical composition of Claim 32 wherein the agonist consists of the amino acid sequence

Ala-Gly-Try-Lys-Pro-Asp-Glu-Gly-Lys-Arg-Gly-Asp-Ala-Cys-Glu-Gly-Asp-Ser-Gly-Gly

-Pro-Phe-Val- (SEQ ID: NO. 5), or an N-terminal truncated fragment thereof, provided that zero, one or two amino acids at positions 1-9 in the agonist are conservative substitutions of the amino acid at the corresponding position of SEQ ID: NO. 5.

35. (Amended) A method of stimulating bone growth at a site in a subject in need of osteoinduction, said method comprising the step of administering to the site a therapeutically effective amount of a peptide consisting of the sequence Ala-Gly-Try-Lys-Pro-Asp-Glu-Gly-Lys-Arg-Gly-Asp-Ala-Cys-Glu-Gly-Asp-Ser-Gly-Gly -Pro-Phe-Val (SEQ ID: NO. 5).

36. (Amended) A method of stimulating bone growth at a site in need of a bone graft in a subject, said method comprising the step of administering to the site a therapeutically effective amount of a peptide consisting of the sequence Ala-Gly-Try-Lys-Pro-Asp-Glu-Gly-Lys-Arg-Gly-Asp-Ala-Cys-Glu-Gly-Asp-Ser-Gly-Gly -Pro-Phe-Val (SEQ ID: NO. 5).

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37. (Amended) A method of stimulating bone growth in a subject at a segmental bone gap, a bone void or a non-union fracture, said method comprising the step of administering to the bone gap, bone void or nonunion fracture a therapeutically effective amount of a peptide consisting of the sequence Ala-Gly-Try-Lys-Pro-Asp-Glu-Gly-Lys-Arg-Gly-Asp-Ala-Cys-Glu-Gly-Asp-Ser-Gly-Gly-Pro-Phe-Val (SEQ ID: NO. 5).

Please add new claims 38-43.

a8

38. (New) The method of Claim 5, wherein the agonist comprises a C-terminal amide.

39. (New) The method of Claim 5, wherein the agonist comprises Ala-Gly-Tyr-Lys-Pro-Asp-Glu-Gly-Lys-Arg-Gly-Asp-Ala-Cys-Glu-Gly-Asp-Ser-Gly-Gly-Pro-Phe-Val-NH_2 (SEQ ID: NO. 6).

40. (New) The method of Claim 5, wherein the agonist consists of Ala-Gly-Tyr-Lys-Pro-Asp-Glu-Gly-Lys-Arg-Gly-Asp-Ala-Cys-Glu-Gly-Asp-Ser-Gly-Gly-Pro-Phe-Val-NH_2 (SEQ ID: NO. 6).

41. (New) A method of stimulating bone growth at a site in a subject in need of osteoinduction, said method comprising the step of administering to the site a therapeutically effective amount of an agonist consisting of the sequence of Ala-Gly-Tyr-Lys-Pro-Asp-Glu-Gly-Lys-Arg-Gly-Asp-Ala-Cys-Glu-Gly-Asp-Ser-Gly-Gly-Pro-Phe-Val-NH_2 (SEQ ID: NO. 6).

42. (New) A method of stimulating bone growth at a site in need of a bone graft in a subject, said method comprising the step of administering to the site a therapeutically effective amount of an agonist consisting of the sequence of Ala-Gly-Tyr-Lys-Pro-Asp-Glu-Gly-Lys-Arg-Gly-Asp-Ala-Cys-Glu-Gly-Asp-Ser-Gly-Gly-Pro-Phe-Val-NH_2 (SEQ ID: NO. 6).

A8 Cont

43. (New) A method of stimulating bone growth at a segmental bone gap, a bone void or a non-union fracture, said method comprising the step of administering to the bone gap, bone void or non-union fracture a therapeutically effective amount of an agonist consisting of the sequence of Ala-Gly-Tyr-Lys-Pro-Asp-Glu-Gly-Lys-Arg-Gly-Asp-Ala-Cys-Glu-Gly-Asp-Ser-Gly-Gly-Pro-Phe-Val-NH_2 (SEQ ID: NO. 6).